UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/714,358	11/14/2003	Kentaro Takakura	10873.1344US01	3325

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EXAMINER
BLOOM, NATHAN J

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _02/11/2008_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) _1-30_ is/are pending in the application.

    4a) Of the above claim(s) _4-18 and 20-29_ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-3, 19 and 30_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

Applicants' response to the last Office Action, filed on February 11th, 2008 has been

entered and made of record.

Continued Prosecution Application

1.   A request for continued examination under 37 CFR 1.114, including the fee set forth in

37 CFR 1.17(e), was filed in this application after final rejection. Since this application is

eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e)

has been timely paid, the finality of the previous Office action has been withdrawn pursuant to

37 CFR 1.114. Applicant's submission filed on 02/11/2008 has been entered.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3.   Claims 1-3, 19, and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by

Hirano (PCT WO994/44368, Note: Used English language equivalent US 6961474 for

rejection).

Instant claim 1: An encoding device performing run-length encoding and variable-length

encoding, comprising:

an input portion for sequentially inputting one block of m by n data [*Fig. 2-3 and 9(b)*

depict the blocks of m by n data that are input, and 201-202 address and store the m by n data

block in 201 (memory bank) depicted in Fig.13 and further described in lines 14-34 of column

20];

a comparing and determining portion for determining for each individual data unit input

by the input portion whether its value is 0 (zero) [*203 of Fig. 13 determines zero portion, lines*

35-47 of column 20] ;

an information register for storing determination result information on the results of the

determination by the comparing and determining portion [*The information register stores the*

results of the comparing and determining portion see 204a-b of Fig. 13 and the memory contents

shown in figure s 14(a)-14(c) and the corresponding disclosure of lines 35-47 of column 20. As

can be seen in figure 14(b) the FIFO memory of 204a-b stores the valid coefficients and the run-

length as determined by the comparing and determination portion, wherein the run-length is

storing the run of zero data between valid coefficients (or interval of zeroes between valid

coefficients). Furthermore, an information register is a type of memory device and can be

implemented with other memory components such as a FIFO, buffer, or other related memory

device. Such a device is described by Hirano (FIFO) which stores the comparison data in a

portion of the memory and the valid coefficient data in the other portion of the memory.];

a data buffer for storing data input by the input portion [*As per above, the memory bank*

stores the input received and communicates this information to the counter and then to the FIFO

memory devices. The items 204a&b of figure 13 store the valid data coefficients of the input

received from the input portion as is described in the corresponding disclosure of lines 13-29 of

column 20. As per the discussion above the valid data coefficients are stored in a portion of the

memory that were received from the input and then processed by the comparing and determining

(data counter) unit.];

a read control portion for controlling selective reading of the data from the data buffer in

such a manner that only input data having a value that is not 0 (zero) are read out based on the

determination result information stored in the information register [*Refer to items 204a-b and*

205 of Fig. 13 and Fig. 14 a-b, lines 35-63 of column 20. Hirano teaches (and shows in figure

14b) that FIFO stores the zero run-length and that only non-zero valid coefficients (the valid

coefficients are the actual values from the input) are read into the FIFO devices. Furthermore,

the determination of the valid coefficient and the run-length values is performed by the data

counter portion.];

a run-length encoding portion for performing run-length encoding by calculating the

interval between the bit position corresponding to the current data selectively read out in the

information register and the bit position corresponding to the last data selectively read out in the

information register; and [*Hirano discloses in Figures 13 and 14 and in the written description*

provided in columns 20-23 the run length encoding of the input data and determination result

information that is stored in the data buffer/information register, wherein the data selected from

204a&b is the run-length and valid data coefficients and the selector alternately selects this data

thus producing (see Figure 14 for a flow diagram and columns 20-23 for a written description of

this process) run length encoded data. Furthermore, the run-length value as can be seen in

figure 14 represents the interval between valid coefficients, and thus Hirano teaches the

determination of the run-length based on the interval between bit positions. Since an interval by

definition represents the number of something between a series of points then the number of

zeroes between two bit positions represents an interval of zero values.] ; and

a variable-length encoding portion for performing variable-length encoding using as a data pair

the data that have been read selectively form the data buffer and the number of consecutive data

having a value of 0 (zero) that is obtained by the run-length encoding portion [*206 of Figure 13,*

lines 48-63 of column 20, also see Fig 14 which depicts the run-length (consecutive data having

a value of 0) and the valid data coefficients being supplied after the selector unit has selectively

read the data from the buffers (Fig. 14 part c is the output)].

Instant claim 2: The encoding device according to claim 1, wherein the determination result

information is stored in the information register in a zig-zag scan order with respect to the

arrangement of the data in the block [*Fig. 9b, lines 13-42. The use of a zig-zag scan order for*

DCT coefficients was known to one of ordinary skill in the art at the time of the invention.].

Instant claim 3: The encoding device according to claim 1, further comprising: a write control

portion for controlling writing of the data to the data buffer; wherein the write control portion

permits writing to the data buffer only if the comparing and determining portion has determined

that the value of the data is not 0 (zero). [*203 of Fig. 13 only writes input data to the buffer (204*

a and b) if it is non-zero input data.]

Instant claim 19: Claim 19 describes the method that is performed by the device of claim 1.

Since claim 1 describes the system in terms of its function it also describes the method that the

device performs. Thus in view of the rejection of claim 1, Hirano has also disclosed the method.

Instant claim 30: The encoding device according to claim 1, wherein the input portion inputs the

data into the computing and determining portion simultaneously or before the timing for

inputting the data into the data buffer. [*See Fig. 13 of Hirano, which depicts the "Determining*

and Comparing portion" as item 203 and the input buffer as 204a and 204b. As can be seen

from the flow of this diagram the input is received by the "Determining and Comparing portion"

prior to being stored into the memory (data buffer).]

Contact Information

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Nathan Bloom whose telephone number is 571-272-9321. The

examiner can normally be reached on Monday through Friday from 8:30 am to 5:00 pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Samir Ahmed, can be reached on 571-272-7413. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NB

/Samir A. Ahmed/
Supervisory Patent Examiner, Art Unit 2624